

WHAT IS CLAIMED IS:

1. A DFB laser driving device for driving a DFB laser to output optical signals having a predetermined wavelength and a predetermined output level, the DFB laser driving device comprising:

an input unit adapted to input set values of a wavelength and an output level;

an approximate temperature calculating section adapted to calculate an approximate temperature of the DFB laser based on the set values of the wavelength and output level;

an output level variation calculating section adapted to calculate an output level variation of the DFB laser based on the approximate temperature;

an output level controlling section adapted to calculate a calculated value based on the output level variation and the set value of the output level, so as to control the output level of the DFB laser based on the calculation value; and

a temperature controlling unit adapted to calculate a set temperature of the DFB laser based on the calculated value and the set value of the wavelength so as to control the temperature of the DFB laser based on the set temperature of the DFB laser.

2. A method for driving a DFB laser to output optical signals having a predetermined wavelength and a predetermined output level, the method comprising:

inputting set values of a wavelength and a output
5 level;

calculating an approximate temperature of the DFB laser based on the set values of the wavelength and output level;

calculating an output level variation of the DFB laser based on the approximate temperature;

calculating a calculated value based on the output level variation and the set value of the output level;

controlling the output level of the DFB laser based on the calculated value;

calculating a set temperature of the DFB laser based on the calculated value and the set value of the wavelength; and

controlling the temperature of the DFB laser based on the set temperature.

3. A storage medium storing therein a program, which can be executed by a computer, for driving a DFB laser to output optical signals having a predetermined wavelength and a predetermined output level, the program
25 comprising:

inputting set values of a wavelength and a output level;

calculating an approximate temperature of the DFB laser based on the set values of the wavelength and output
5 level;

calculating an output level variation of the DFB laser based on the approximate temperature;

calculating a calculated value based on the output level variation and the set value of the output level to
10 obtain an calculated value;

controlling the output level of the DFB laser based on the calculated value;

calculating a set temperature of the DFB laser based on the calculated value and the set value of the
15 wavelength; and

controlling the temperature of the DFB laser based on the set temperature.